

## FOCS

### **Unit-1<sup>st</sup>:**

Q.1 What are the various types of addressing modes? explain them with example.

Q.2 What is instruction cycle? Explain phases of instruction cycle.

Q.3 What is register transfer language.

Q.4 What is instruction format? Explain various instruction format with example.

Q.5 Explain Harvard architecture and von-newman architecture with block diagram.

Q.6 What do you mean by micro-operation? List type of micro-operations.

Q.7 Enlist and explain the function of all the computer registers.  
(MAR,MDR,AC,IR,PC).

Q.8 Write the difference between address bus and Data bus.

### **Unit-2<sup>nd</sup> :**

Q.1 Write the short notes on microinstruction format.

Q.2 Write the short notes on Hardwired control unit.

Q.3 Define microprogram.also explain the working of micro programmed control unit.

Q.4 Differentiate between hardwired and micro programmed control unit.

Q.5 Define terms control memory.

Q.6 Define terms micro program sequencing.explain the working principle of micro program sequencing.

Q.7 Describe the procedure for addition & subtraction for fixed point number.

Q.8 Draw the logic diagram of ALU that perform addition,subtraction and shift operation.

Q.9 Draw one stage of arithmetic ,logic ,shift operation and write its function table.

### **Unit-3<sup>rd</sup>**

Q.1 Differentiate between Serial & Parallel data transfer.

Q.2 Differentiate between Synchronous and Asynchronous serial transfer.

Q.3 What do you mean by data transfer modes? Explain various data transfer modes in detail.

Q.4 Write short note on interrupt initiated I/O.

Q.5 Differentiate between I/O program controlled transfer and DMA transfer.

Q.6 Explain the I/O Processor.

Q.7 Write the short note on Direct memory access(DMA). Draw block diagram.

Q.8 Write the short note on: 1) Simplex 2) Half duplex 3) Full duplex.

Q.9 Define the term I/O interface.

#### **Unit-4<sup>th</sup>:**

Q.1 Differentiate RAM and ROM.

Q.2 What is memory hierarchy. Draw the block diagram of memory hierarchy of computer system.

Q.3 What is cache memory. Explain direct mapping technique of cache organization.

Q.4 What do you mean by Hit Ratio.

Q.5 What is a virtual memory? Explain the virtual memory address translation with block diagram.

Q.6 Write the short note on associative memory. Draw the block diagram.

Q.7 Write a short note on memory management hardware.

#### **Unit-5<sup>th</sup> :**

Q.1 Write the short note on multiprocessor.

Q.2 What are the interconnection structures? Explain different types of interconnection networks.

Q.3 Write the short note on inter-processor communication.

Q.4 What is pipelining? Explain pipelined architecture with its diagram.

Q.5 What do you mean by instruction pipeline conflicts?

Q.6 What is vector processing? Explain any one vector processing method with suitable illustration.

Q.7 Write the short note on array processor.

Q.8 Write comparison between RISC and CISC.